Town of Lyme

TELECOMMUNICATIONS FACILITIES ORDINANCE

SECTION I – PURPOSE:

The purpose of this ordinance is to:

A. Preserve the authority of the Town of Lyme to regulate wireless telecommunications facilities and provide a reasonable opportunity to providers of such services to effectively and efficiently provide such to residences, businesses, and visitors.

B. Provide standards and requirements for the operation, siting, design, appearance, construction, monitoring, modification, and removal of wireless communication facilities.

C. Protect the historic, cultural, natural, and aesthetic resources of the Town of Lyme and property values therein by minimizing the adverse impacts of wireless communication facilities.

D. Locate wireless communication facilities and/or antennas in a manner which promotes the general safety, health, welfare, and quality of life of the residents of the Town of Lyme and those who visit.

E. Encourage the use of alternative design tower structures, collocation, camouflaged facilities, monopoles, stealth facilities, and construction of facilities with the ability to serve multiple providers.

SECTION II – DEFINITIONS:

Adequate Capacity: A provider's capacity for wireless telephony is considered to be "adequate" if the grade of service ("GOS") is p.05 or better for median teletraffic levels offered during the typical busy hour, as assessed by direct measurement of the facility in question. The GOS shall be determined by the use of standard Erlang B calculations. As call blocking may occur in either the land line or radio portions of a wireless network, adequate capacity for this regulation shall apply only to the capacity of the radio components. Where capacity must be determined prior to the installation of the personal wireless services facility in question, adequate capacity shall be determined on the basis of a 20% busy hour (20% of all offered traffic occurring within the busiest hour of the day), with total daily traffic based on aggregate estimates of the expected traffic in the coverage area.

Adequate Coverage: A provider's coverage for wireless telephony is "adequate" within that area surrounding a base station where the predicted or measured median field strength of the transmitted signal is such that most of the time, transceivers properly installed and operated will be able to communicate with the base station without objectionable noise (or excessive-bit-error-rate for digital) and without calls being dropped. In the case of cellular communications in a rural environment, this would be a signal strength of at least –90 dBm. It is acceptable for there to be holes within the area of adequate coverage as long as the signal regains its strength further away from the base station. The outer boundary of the area of adequate coverage, however, is that location past which the signal does not regain.

Alternative Design Tower Structure: Artificial trees, clock towers, bell steeples, light poles, silos and similar alternative-design mounting structures that camouflage or conceal the presence of antennas or towers. (See also Stealth Facility.)

Amateur Radio Tower: A freestanding or building-mounted structure, including any base, tower or pole, antenna, and appurtenances, intended for airway communication purposes by a person holding a valid amateur radio (HAM) license issued by the Federal Communications Commission.

Antenna: An exterior device for transmitting and/or receiving electromagnetic waves, which is attached to a wireless communication facility or other structure.

Average Tree Canopy Height: The average height found by inventorying the height above ground level of all trees over 20 feet in height for a radius of 150 feet.

Camouflaged: Wireless communication facilities that are disguised, hidden, part of an existing or proposed structure, or placed within an existing or proposed structure.

Channel: The segment of the radiation spectrum to or from an antenna which carries one signal. An antenna may radiate on many channels simultaneously.

Collocation: Locating the wireless communications equipment of more than one provider on a single structure.

Communication Tower: A guyed or self-supporting wireless communication facility constructed as a free-standing structure or in association with a building, other permanent structure, or equipment, containing one or more antennas intended for transmitting and/or receiving television, AM/FM radio, digital, microwave, cellular, telephone, or similar forms of electronic communication.

dBm: Unit of measure of the power level of a signal expressed in decibels above 1 milliwatt.

Equipment Shelter: A structure located at a base station designed principally to enclose equipment used in connection with wireless communication facility transmissions.

FAA: Federal Aviation Administration.

Fall Zone: A safety area surrounding a ground mounted wireless facility.

FCC: Federal Communications Commission.

Ground-mounted: Mounted on the ground.

Guyed Wireless Communication Facility: A lattice or monopole wireless communication facility that is secured to the ground or other surface by diagonal cables for lateral support.

Mount: The structure or surface upon which antennas are mounted, including the following types of mount: ground-mounted, roof-mounted, side-mounted, and structure-mounted.

Monopole: A single self-supporting vertical pole with no guy wire anchors, usually consisting of a galvanized or other unpainted metal or a wooden pole with below grade foundations.

Non-complying Wireless Communication Facility: Any non-complying wireless communication facility that existed lawfully in conformance with these zoning regulations prior to their adoption, revision, or amendment.

Permit: Embodies the rights and obligations extended by the Town of Lyme to an operator to own, construct, maintain, and operate its facility within the boundaries of the municipality.

Provider: An entity authorized and/or regulated by the FCC to provide wireless communications services to individuals or institutions.

Radiofrequency (RF) Engineer: An engineer specializing in electrical or microwave engineering, especially the study of radio frequency.

RFR: (Radiofrequency Radiation): The emissions from wireless communication facilities.

RFI: (Radiofrequency Interference): The emissions from wireless communication facilities, which can affect the normal operation of electronic devices.

Receiving Antenna: Antenna used exclusively for receiving signals for television and radio broadcast.

Roof-mounted: Mounted on the roof of a building.

Scenic View: A wide angle or panoramic field of sight that may include natural and/or manmade structures and activities. A scenic view may be from a stationary viewpoint or be seen as one travels along a roadway, waterway, or path. A view may be to a far away object, such as a mountain, or a nearby object, such as an historic building.

Side-mounted: Mounted on the side of a building.

Stealth Facility: Any communications facility that is designed to blend into the surrounding environment. Examples of stealth facilities may include architecturally screened roof-mounted antennas, building-mounted antennas painted to match the existing structure, antennas integrated into architectural elements, antenna structures designed to look like light poles, and structures designed to resemble natural features such as trees or rock outcroppings. (See also Alternative Design Tower Structure.)

Structurally Able: The determination that a tower or structure is capable of carrying the load imposed by the proposed equipment under all reasonable predictable conditions as determined by a professional structural engineering analysis.

Structure-mounted: Mounted on a structure other than a building.

Telecommunications Facility: Means any antenna, tower, or other structure intended for use in connection with the transmission or reception of radio or television signals or any other electromagnetic transmission/reception. It includes all accessory structures and improvements (e.g. roads, parking areas, fencing, equipment buildings, etc.). This definition does not include an antennas used exclusively by amateur radio facilities.

Temporary Wireless Communication Facility: Any tower, pole, antenna, etc., designed for use while a permitted permanent wireless facility is under construction or repair, or for a special event or conference.

Tower: Means any structure that is designed and constructed primarily for the purpose of supporting one or more antennas.

Vantage Point: A point located on a public roadway, waterway, or path from which a proposed wireless communication facility will be visible.

Wireless Communication Facility: A tower, pole, antenna, guy wire, or related fixture intended for use in connection with transmission or receipt of radio or television signals or any other electromagnetic spectrum-based transmission/reception regulated by the FCC; and a constructed or improved road, trail, building, or structure incidental to a communication facility. This definition does not include antenna used exclusively by amateur radio facilities.

SECTION III - DISTRICTS PERMITTED AND PERMITTED BY SPECIAL EXCEPTION:

Telecommunications use, including new tower construction and collocation on an existing tower or structure, shall be permitted or permitted by Special Exception in the following districts subject to all applicable local, state, and federal regulations and Site Plan Review and approval by the Lyme Planning Board.

New tower construction shall not be permitted in any of the Conservation Protection Districts defined in section 3.25 of the zoning ordinance.

Table 3-1

Zoning District	New Tower Construction	Collocation on Existing Tower	Collocation on Existing Structure
Lyme Center	N	SE	SE
Lyme Common	N	SE	SE
Commercial	SE	SE	SE
Rural	SE	SE	SE
East Lyme	N	SE	SE
Skiway	SE	SE	SE
Mountain & Forest	N	SE	SE

Y Permitted provided that all other requirements of federal and state law and the zoning ordinance have been met and a zoning permit has been issued.

SE Permitted by special exception provided that all other requirements of federal and state law and the zoning ordinance have been met, approval has been granted by the Zoning Board of Adjustment, and a zoning permit has been issued.

N Not permitted.

SECTION IV - STANDARDS FOR TELECOMMUNICATIONS FACILITIES:

Federal and State Requirements: All facilities must meet or exceed current standards and regulations of the FAA, FCC, and any other agency of the federal or state government with the authority to regulate such facilities. If such standards and regulations are changed, the owners of facilities governed by this Ordinance shall bring these into compliance within six (6) months of the effective date of the changes, unless a more stringent compliance schedule is mandated by the controlling agency. Failure to bring facilities into compliance with any changes shall constitute grounds for the removal of the tower or antenna at the owner's expense.

Safety Standards: To ensure the structural integrity of towers and antennas, all facilities will be inspected every two years by an engineer approved by the Town, with the cost to be paid by the owner. The engineer will submit a report to the Town. If the report concludes that a tower fails to comply with applicable codes and/or generally accepted standards and constitutes a danger to persons or property, the owner will receive notice that he/she has 30 days to correct the deficiencies. If the owner fails to comply within 30 days, such action shall constitute grounds for the removal of the tower or antenna, at the owner's expense.

Additional Requirements for Telecommunications Facilities:

Setbacks: Wireless communication facilities shall comply with the setback provisions of the zoning district in which the facility is located.

Fall Zones:

a. Fall Zones for Existing and New-Ground Mounted Facilities: To ensure public safety, the minimum distance of any ground-mounted wireless service facility to any property line, habitable dwelling, business, right-of-way, or institutional or public building shall be no less than 125% of the height of the facility, including antennas or vertical appurtenances. This setback shall be referred to as a fall zone. The fall zone may cross property lines, so long as the applicant secures a fall zone easement from the affected property owner(s). The area of the easement shall be shown on all applicable plans submitted to the Town, and the terms of the easement shall be provided as part of the Site Plan review.

b. Fall Zones for Non-Ground-Mounted Facilities: In the event that an existing structure such as a building, barn silo, church steeple, or utility pole is proposed as a mounting for a wireless communication facility, a fall zone shall not be required.

Height Limitations: This section supercedes section 5.23 of the zoning ordinance.

a. Height Limitations for Ground-Mounted Facilities/Towers: In order to protect public safety and to preserve the scenic character and appearance of the area, the height limit for a wireless communication facility, antennas and facility-related fixtures in all districts shall not exceed twenty (20) feet above the average height of the tree line within one hundred fifty (150) feet of the base of the facility. Notwithstanding the above, an additional height not to exceed twenty (20) feet may be approved upon a finding by the Zoning Board of Adjustment as part of their review, that the additional height is necessary in order to provide adequate coverage or to accomplish collocation, and that the additional height will not have an adverse visual impact on the scenic character or appearance of the area.

b. Height Increase for Existing Structures and Buildings: In the event that an existing structure (other than a wireless communication tower) is proposed as a mount for a wireless communication facility, the height of the original structure shall not be increased by more than fifteen (15) feet above the highest point of a flat or mansard roof or fifteen (15) feet above the height at the midpoint between the peak and the eave of other roof styles, unless the facility is completely camouflaged (for example, a facility within a flag pole, steeple or chimney). Any increase in height shall be in scale and proportionality to the structure as originally configured. A provider may locate a wireless communication facility on a building that is legally non-conforming with respect to height, provided that the provisions of this section are met.

Camouflaging Facilities: New ground-mounted wireless communication facilities shall not be located within open areas or on or near the top of a ridge. To the greatest extent feasible, all wireless communication facilities shall be designed to blend into the surrounding environment through the use of existing vegetation, landscaping and screening, the use of compatible materials and colors, or other camouflaging techniques.

a. Camouflage for Ground-Mounted Facilities/Towers: A buffer of dense tree growth that extends continuously for a minimum distance of one hundred fifty (150) feet from the mount shall surround new ground-mounted wireless communication facilities. Such buffer shall screen views of the facility in all directions. The trees must be existing on the subject property, planted on site, or within a landscape easement on an adjoining site. The Planning Board shall have the authority to decrease, relocate, or alter the required buffer based on site conditions and add other conditions to the permit regarding screening and landscaping. The easement or lease shall specify that the trees within the buffer shall be maintained and shall not be removed or trimmed, unless the trees are dead or dying and present a hazard to persons or property, or approval is granted by the Planning Board.

b. Camouflage for Facilities on Existing Buildings or Structures – Roof-Mounts: When a wireless communication facility extends above the roof height of a building on which it is mounted, every effort shall be made to conceal or camouflage the facility within or behind existing or new architectural features to limit its visibility from public ways. Facilities mounted on a roof shall be stepped back from the front facade in order to limit their impact on the building's silhouette.

c. Camouflage for Facilities on Existing Buildings or Structures – Side-Mounts: Wireless communication facilities that are side-mounted shall be camouflaged.

d. Camouflaging for Equipment Shelters: Equipment shelters shall be camouflaged behind an effective year-round landscape buffer at the time of planting, equal to or greater than the height of the proposed building, and/or wooden fence as determined by the Planning Board as part of Site Plan review. If mounted on a rooftop, the equipment shelter shall be concealed or camouflaged so that the shelter either is not visible at grade or appears to be part of the original structure.

Lighting:

a. Wireless Communication Facility Lighting: Wireless communication facilities shall not be illuminated by artificial means and shall not display lights unless such lighting is specifically required by the FAA or other federal or state authority for a particular wireless communication facility because of its height. If any lighting is required solely because of the height of the facility, the applicant must demonstrate that it has or will request the least visually obtrusive marking and/or lighting scheme in the FAA applications. The Planning Board, as part of Site Plan review, may review the plan to determine if the lighting requirement can be eliminated by a reduced height or a change in location of the facility.

b. Ground Lighting: Emergency, safety, or security ground lighting may be utilized when there are people at the site. All ground lighting shall be shielded and directed downward towards the facility and away from neighboring properties.

Bulk, Height, and Glare: All wireless communication facilities shall be designed in such a manner as to minimize the visual impact of height, mass, and guy wire supports for the intended use. Materials utilized for the exterior of any structure shall be of a type, style,

and location so as to minimize glare and not result in an adverse visual impact from any historic or scenic view, public vantage point, or abutting properties.

Finish: New wireless communication facilities shall have a corrosion resistant matte finish unless otherwise required. The Planning Board, as part of its Site Plan review, may require the wireless communication facility to be painted or otherwise camouflaged to minimize the adverse visual impact.

Fencing: The area around the wireless communication facility and communications equipment shall be completely fenced and gated for security. Fencing shall be chosen to minimize visual impact and be consistent with its intended safety purpose.

Signs: A sign no greater than six (6) square feet stating the name of the facility's owner and a 24-hour emergency telephone number shall be posted adjacent to the entry gate. In addition, "No Trespassing" or other warning signs and the federal wireless communication facility registration plate, where applicable, may be posted on the fence or as required to meet federal requirements. No commercial signs or lettering shall be placed on the tower or facility. This provision supercedes Article VI of the zoning ordinance.

Noise: The Planning Board may impose conditions to minimize the affect of noise from the operation of machinery or equipment upon nearby properties.

Collocation:

a. New wireless communication facilities shall be designed structurally, electrically, and in all respects to accommodate ~~both~~ the applicant's antenna, additional antennas, and the rearrangement of antennas when the overall permitted height allows. The owner of an approved facility shall allow other providers to collocate on the facility subject to reasonable terms and conditions. Notwithstanding, there shall be no affirmative obligation on the owner to increase the height or width of the facility in order to accommodate the equipment or facilities of another user.

b. The applicant must demonstrate to the satisfaction of the Zoning Board of Adjustment that the new wireless communication facility cannot be accommodated on an existing or approved facility or structure due to one of the following reasons:

    i. Structural or Spatial Capacity: The proposed antennas and equipment would exceed the structural or spatial capacity of the existing or approved facility, as documented by a structural engineer licensed to practice in the State of New Hampshire. Additionally, the existing or approved wireless communication facility cannot be reinforced, modified, or replaced to accommodate planned or equivalent equipment, at a reasonable cost, to provide coverage and capacity comparable to that of the proposed facility.

    ii. Radio Frequency Interference: The proposed antennas and equipment, alone or together with existing facilities, equipment, and/or antennas, would create radio frequency interference (RFI) in violation of federal standards or requirements as documented by a qualified radio frequency engineer.

    iii. Radio Frequency Radiation: The proposed antennas and equipment, alone or together with existing facilities, equipment, and/or antennas, would create

radio frequency radiation (RFR) in violation of federal standards or requirements without unreasonable modification or mitigation measures as documented by a qualified radio frequency engineer.

iv. Existing Facilities: Existing wireless communication facilities cannot accommodate, or be reasonably modified to accommodate, the planned equipment at a height necessary to function reasonably or are too far from the area of needed coverage to function reasonably as documented by a qualified radio frequency engineer.

v. Aesthetics: Aesthetic reasons make it unreasonable to locate the planned equipment upon an existing or approved facility.

vi. Coverage: There are no existing or approved wireless communication facilities in the area in which coverage is sought.

vii. Other: Other specific unforeseen reasons make it unreasonable to locate the planned equipment upon an existing or approved wireless communication facility.

Access Roads: If available, existing entrances and driveways shall be utilized, unless the applicant can demonstrate that a new entrance and driveway will result in less visual and environmental impact. To the extent practicable, new access roads shall minimize disturbances to the natural contour of the land and be located within existing forest or forest fringe areas and not in open fields. Erosion control for the design, construction, and maintenance of access roads shall follow the standards section 4.16 of the Subdivision Regulations. The Planning Board may require underground utilities as a part of its Site Plan review.

Utilities: Utility or service lines shall be designed and located so as to minimize or prevent disruption to the scenic character of the area.

Determination of Visual Impact: Upon review of the applicant's visual analysis, supporting materials, testimony from the parties, and inspections from the designated vantage points, the Zoning Board of Adjustment shall determine that the proposed facility does not have an adverse visual impact on the scenic or natural beauty of the land proposed to be developed (including scenic areas as identified in the Lyme Master Plan) prior to any approvals. The Zoning Board of Adjustment shall consider, among other things, the following in making their determination:

a. The amount of time and time of year during which the proposed facility will be viewed by the traveling public on a public highway, public trail, or public water body;

b. The frequency of the view of the proposed facility by the traveling public;

c. The degree to which the view of the proposed facility is screened by existing and/or proposed vegetation, the topography of the land, and existing structures;

d. Background features in the line of sight to the proposed facility that obscure the facility or make it more conspicuous from all angles of view;

e. The distance of the wireless communication facility from key vantage points and the proportion of which the facility will be visible above the skyline or treeline;

f. The number of members of the traveling public or residents of Lyme and neighboring towns who will be affected by the alteration of the scenic character of the area;

g. The sensitivity or unique value of the particular view affected by the proposed facility; and

h. Significant disruption of a view that provides context to an historic or scenic resource, including the Appalachian Trail.

Non-Complying Wireless Communication Facility: Any changes to a non-complying wireless communication facility must be in conformity with these regulations unless a variance from these regulations is obtained from the Zoning Board of Adjustment.

SECTION V - APPLICATION AND PERMITTING:

Applications for Telecommunications facilities in the Town of Lyme require both a Zoning and Building Permit from the Zoning Administrator and Site Plan review by the Planning Board. All applications shall contain all the information required by Section 9.22 of the Zoning Ordinance, Article IV of the Regulations for Site Plan Review, and all of the information needed to demonstrate compliance with all of the standards for telecommunications facilities as specified in Section A:IV.

The Zoning Administrator and Zoning Board of Adjustment shall follow the procedures of Articles IX and X of the Zoning ordinance in processing and approving or denying an application.

The Planning Board shall follow the procedures of Article VI of the Regulations for Site Plan Review in processing and approving or denying an application.

In addition, telecommunications facilities located in or which may affect historical resources either directly and/or indirectly shall be reviewed by the New Hampshire Division of Historical Resources.

SECTION VI - BONDING AND SECURITY INSURANCE:

The applicant shall provide a bond to the Town in an amount that would be sufficient to cover the costs of removal and disposal of the facility components. The Planning Board shall set the form and amount of the security. The Planning Board shall also require the applicant to submit proof of appropriate liability insurance with respect to the proposed facilities prior to building permit issuance.

The term of the bond shall be negotiated with the Planning Board and administered by the Board of Selectmen. In addition, if the Board requires an engineering assessment in order to set the amount of the bond, the cost shall be borne by the applicant.

SECTION VII - REMOVAL OF ABANDONED ANTENNAS AND TOWERS:

Any antenna or tower that is not operated for a continuous period of 12 months shall be considered abandoned and hazardous to the public health and safety. The owner shall remove the abandoned structure within 90 days. If the abandoned tower is not removed within 90 days, the Town may execute the security and have the tower removed. If there are two or more users of a single tower, this provision shall not become effective until all users cease using the tower.

SECTION VIII - ADMINISTRATION AND ENFORCEMENT:

Administration and enforcement shall be in accordance with Article IX of the Zoning ordinance and Article XVI of the Regulations for Site Plan Review as appropriate.

SECTION IX – SEVERABILITY:

The invalidity of any provision of this ordinance shall not affect the validity of any other provision of this ordinance or any other Town ordinance, by-law, or regulation.

SECTION XIII – APPEALS:

Appeals shall be made in accordance with the requirements of NH RSA Chapters 676 and 677.

Adopted: March 11, 2003